I 49.89:87/47-1/map 9

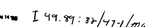
MMS 85-0011
FWS/OBS-82/47.1

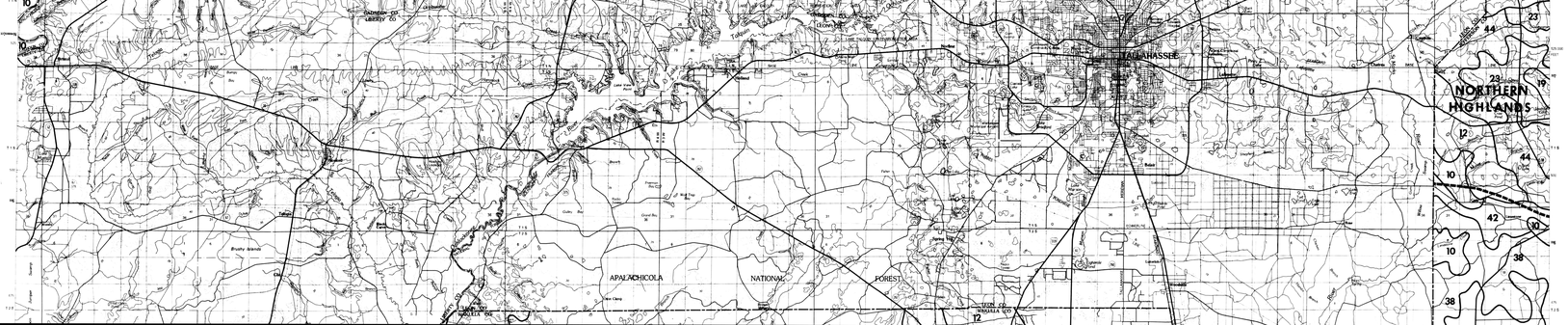
MAP C9

Tallahassee

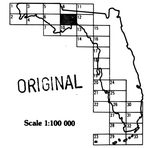
FLORIDA ECOLOGICAL ATLAS

SOILS AND LANDFORMS





SOILS AND LANDFORMS



Scale 1:100 000

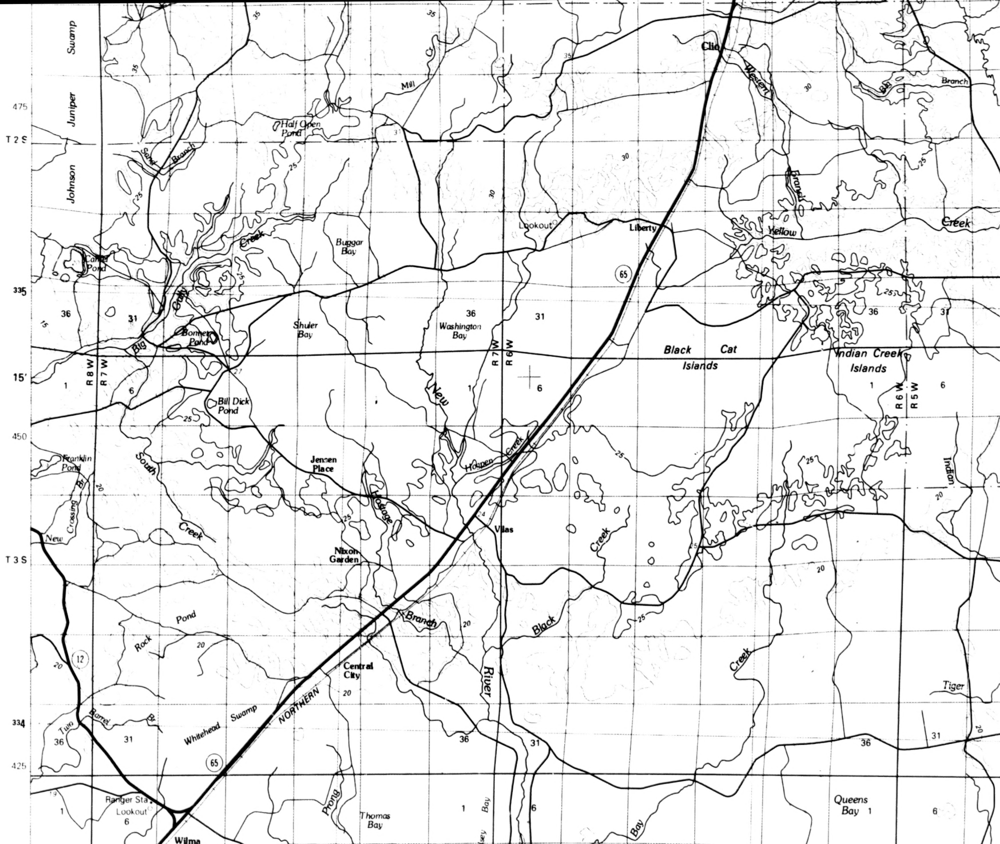
TOPICAL MAPS IN THIS ATLAS:

A. BIOLOGICAL RESOURCES
B. SOCIOECONOMIC FEATURES
C. SOILS AND LANDFORMS
D. OIL, GAS AND MINERALS
E. HYDROLOGY AND CLIMATOLOGY

1984

Produced by U.S. Fish and Wildlife Service and Minerals Management Service

Projection and 10 000 meter grid, zone 17, Universal


475
T 2 S
335
15′
450
T 3 S
334
425
Juniper Swamp
Johnson
Sand Branch
Half Open Pond
Mill Cr.
Clio
Western
Big Branch
Branch
Creek
Yellow
Lookout
Liberty
65
Buggar Bay
Camel Pond
Creek
Gully
Big
Bonnet Pond
Shuler Bay
Washington Bay
Black Cat Islands
Indian Creek Islands
R 8 W
R 7 W
R 7 W
R 6 W
R 6 W
R 5 W
Bill Dick Pond
New
Jensen Place
Hoopen Creek
Franklin Pond
South Creek
Crossing Br.
New
Hostage
Vilas
Nixon Garden
Creek
Indian
Pond
Rock
Branch
Black Creek
Creek
12
Central City
NORTHERN
River
Tiger
Two Barrel Br.
Whitehead Swamp
65
Ranger Sta. Lookout
Wilma
Prong
Thomas Bay
Bay
Bay
Queens Bay
35
35
35
35
30
30
30
30
25
25
25
25
25
25
25
25
25
25
27
24
22
20
20
20
20
20
20
20
20
19
15
36
31
36
31
36
31
36
31
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1
6
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6
36
31
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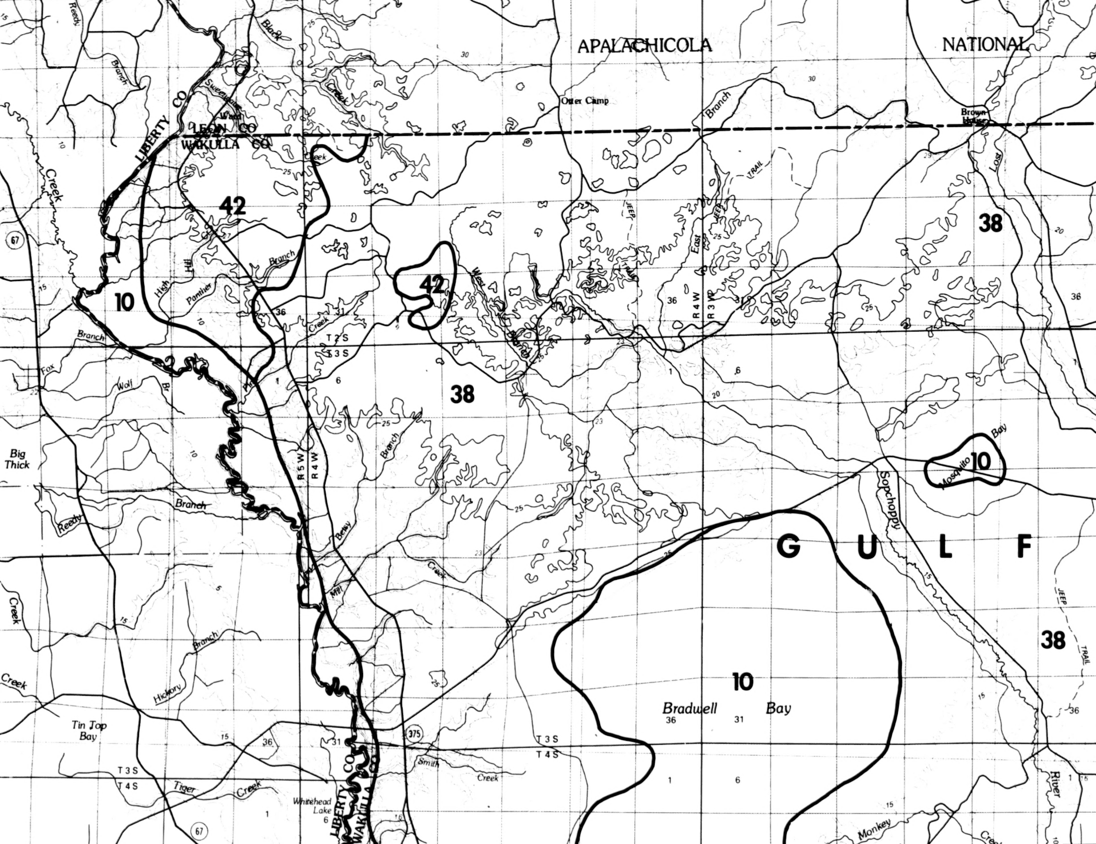
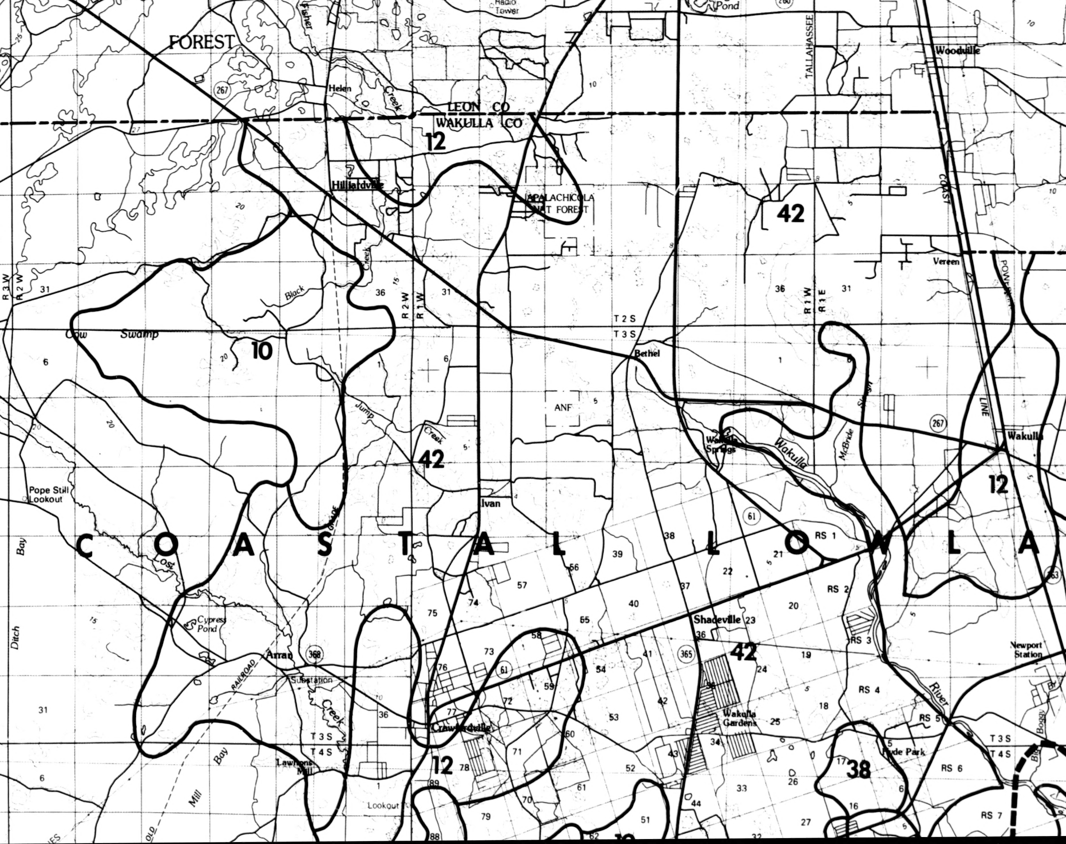
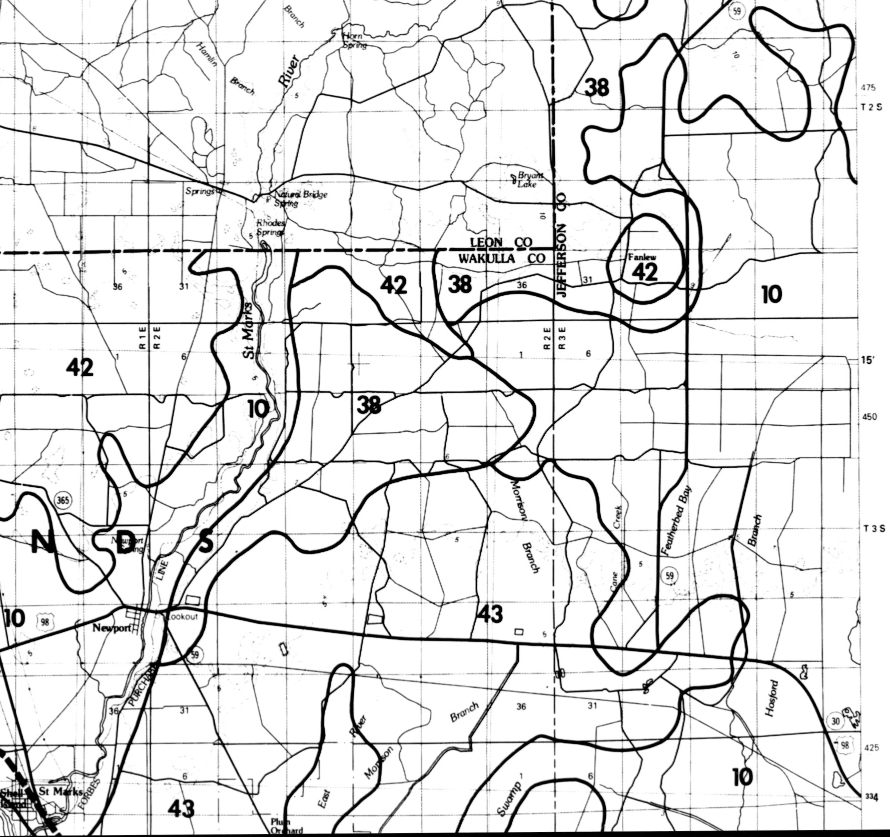
31
36
31
1
6
1
6
1
6



APALACHICOLA
NATIONAL
GULF
LIBERTY CO
LEON CO
WAKULLA CO
42
42
10
10
10
38
38
38
Otter Camp
Brown House
Big Thick
Tin Top Bay
Bradwell Bay
Whitehead Lake
Mosquito Bay
Sopchoppy
River
Lost
Reedy Branch
Black Creek
Sweetwater
Wash
High Hill
Panther Branch
Creek
Fox
Wolf Br
Betsy
Mill
Creek
Branch
Hickory Branch
Tiger Creek
Smith Creek
Monkey Creek
West Branch
East Branch
JEEP TRAIL
JEEP TRAIL
JEEP TRAIL
R 5 W
R 4 W
R 4 W
R 3 W
T 2 S
T 3 S
T 3 S
T 4 S
T 3 S
T 4 S
67
67
375


FOREST
Radio Tower
Pond
Fisher
Helen
Creek
267
LEON CO
WAKULLA CO
12
TALLAHASSEE
Woodville
Hilliardville
APALACHICOLA NAT FOREST
42
COAST
Vereen
Black
Creek
R 3 W
R 2 W
R 1 W
R 1 E
T 2 S
T 3 S
T 4 S
Cow Swamp
10
Bethel
POWER
LINE
ANF
Jump Creek
McBride Slough
267
Wakulla Springs
Wakulla
Wakulla
12
Pope Still Lookout
Ivan
61
GRADE
C O A S T A L L O W L A
Bay
Lost
RS 1
RS 2
RS 3
RS 4
RS 5
RS 6
RS 7
Shadeville
Cypress Pond
Ditch
365
Newport Station
Arran
368
RAILROAD
Substation
Creek
River
Crawfordville
Wakulla Gardens
Hyde Park
Big Boggy
38
Lawhons Mill
Mill
Bay
OLD
Lookout
88
89



Branch
Horn Spring
Hamlin Branch
River
38
475
T 2 S
Bryant Lake
Springs
Natural Bridge Spring
Rhodes Springs
LEON CO
WAKULLA CO
JEFFERSON CO
Fanlew
42
42
38
36
31
10
36
31
R 1 E
R 2 E
St Marks
R 2 E
R 3 E
42
1
6
1
6
15′
10
38
450
365
Morrison Branch
Creek
Featherbed Bay
Branch
T 3 S
N
D
Newport Spring
S
LINE
Cane
59
10
98
Newport
Lookout
43
59
PURCHASE
36
31
River
Branch
36
31
Hosford
30
98
425
East
Morrison
Swamp
6
Shell Island
St Marks
FORBES
43
Plum Orchard
10
334

1984

Sa

Produced by U.S. Fish and Wildlife
Service and Minerals Management Service

Projection and 10,000 meter grid, zone 17: Universal Transverse Mercator
25,000-foot grid ticks based on Florida coordinate system, west zone

Overlay material compiled in 1983 from latest available data obtained from Federal, State and Local government agencies and other sources.

MAJOR SURFACE LANDFORMS

Western Highlands

Escambia Valley

Gulf Coastal Lowlands

Gulf Barrier Chain

Marianna Lowlands

New Hope Ridge

Greenhead Slope

Fountain Slope

Grand Ridge

Northern Highlands

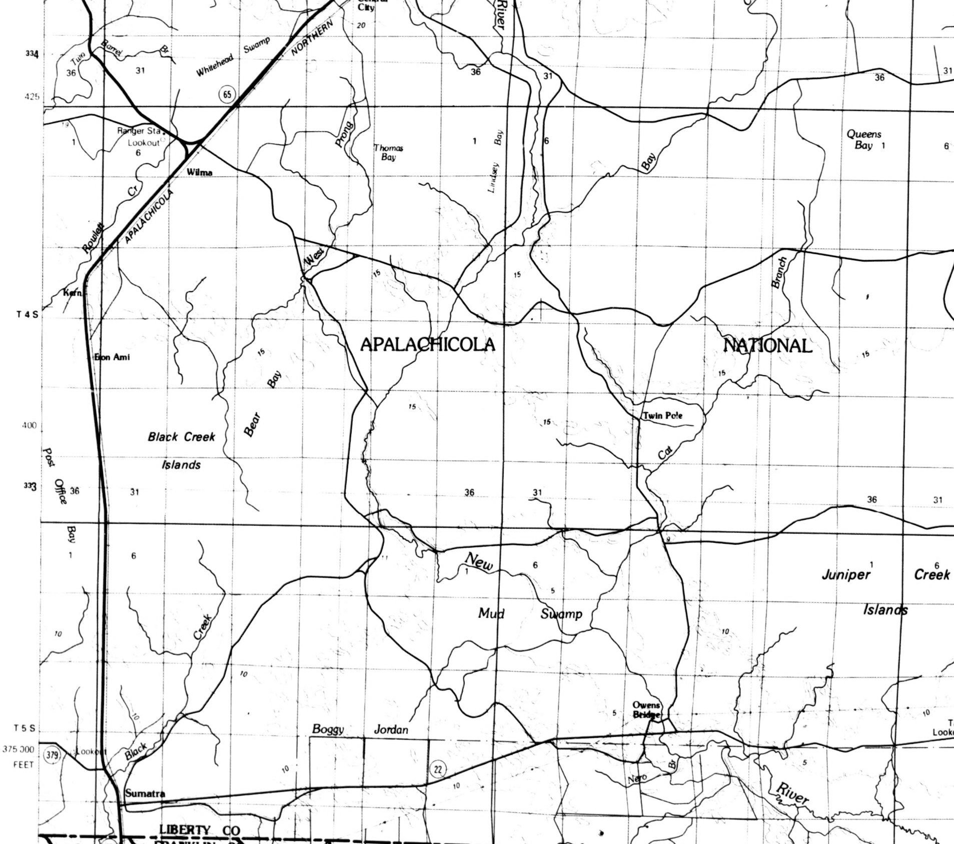
Coastal Swamps

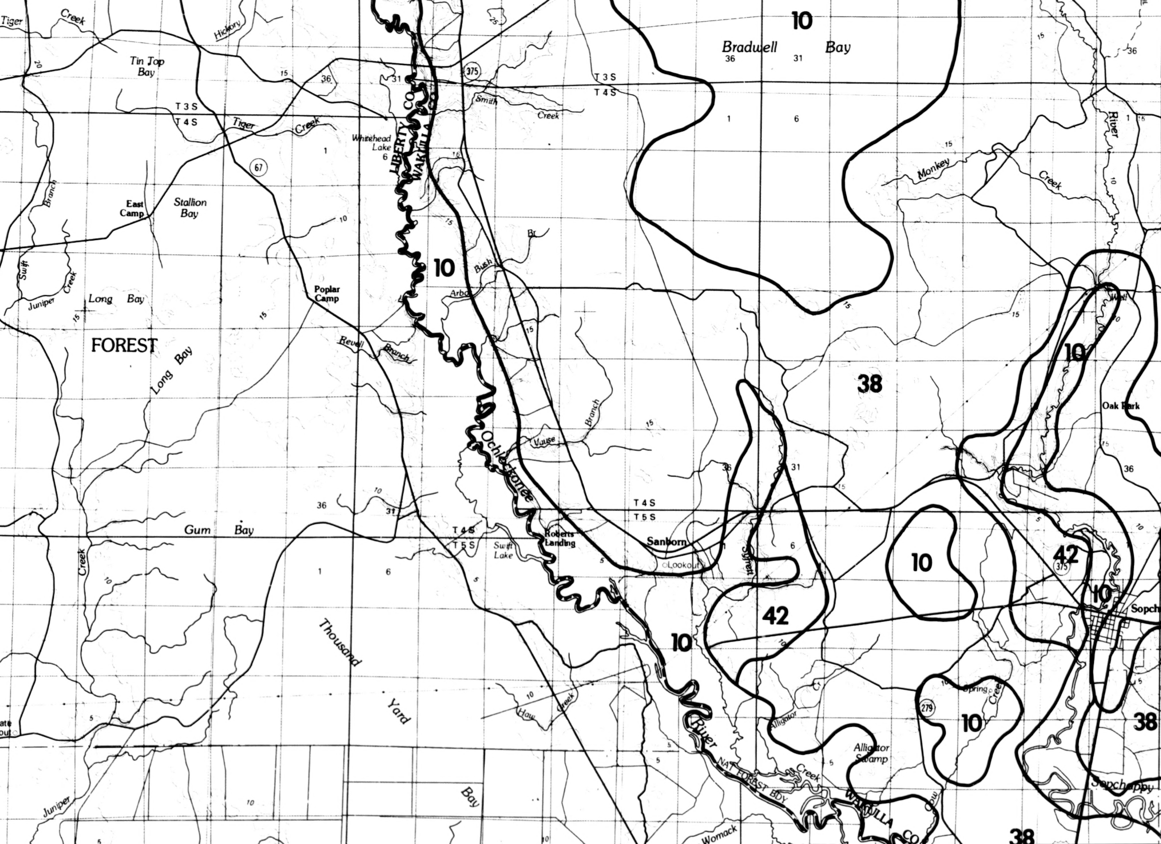
Brooksville Ridge

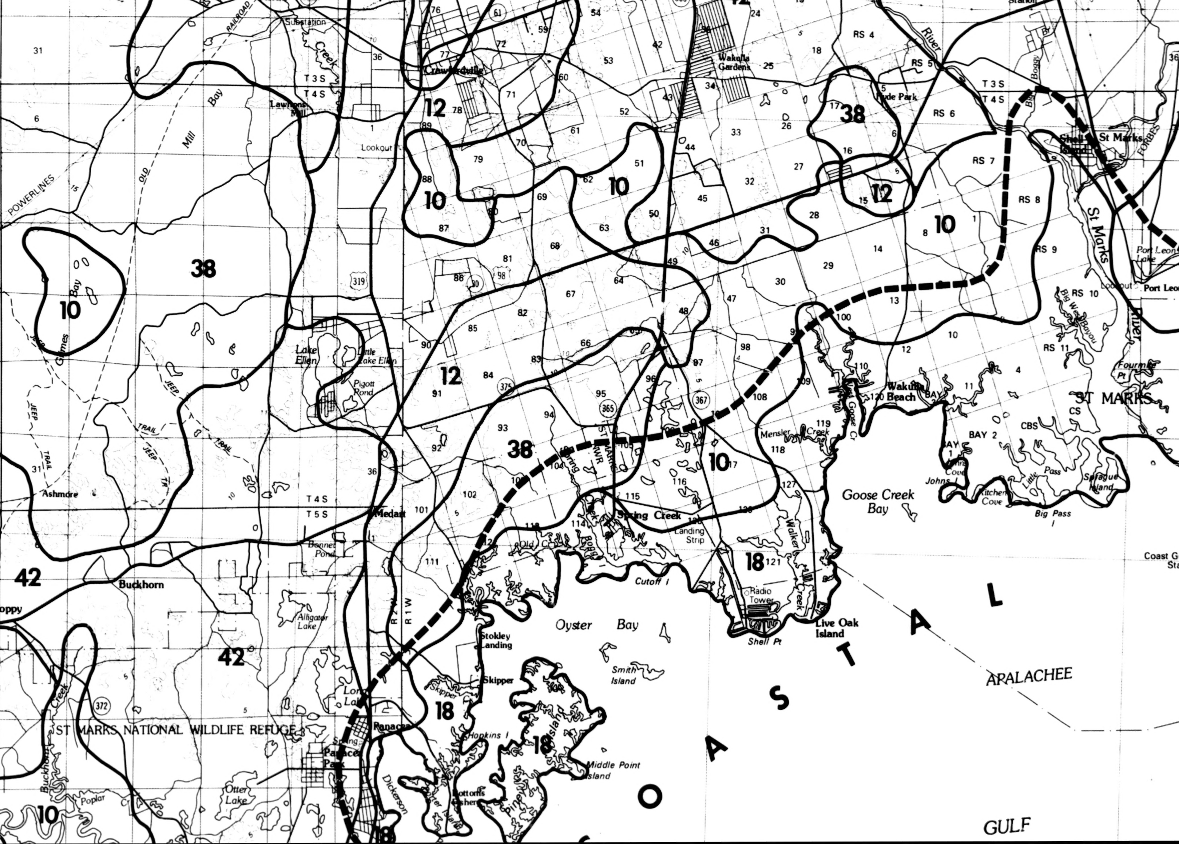
Western Valley

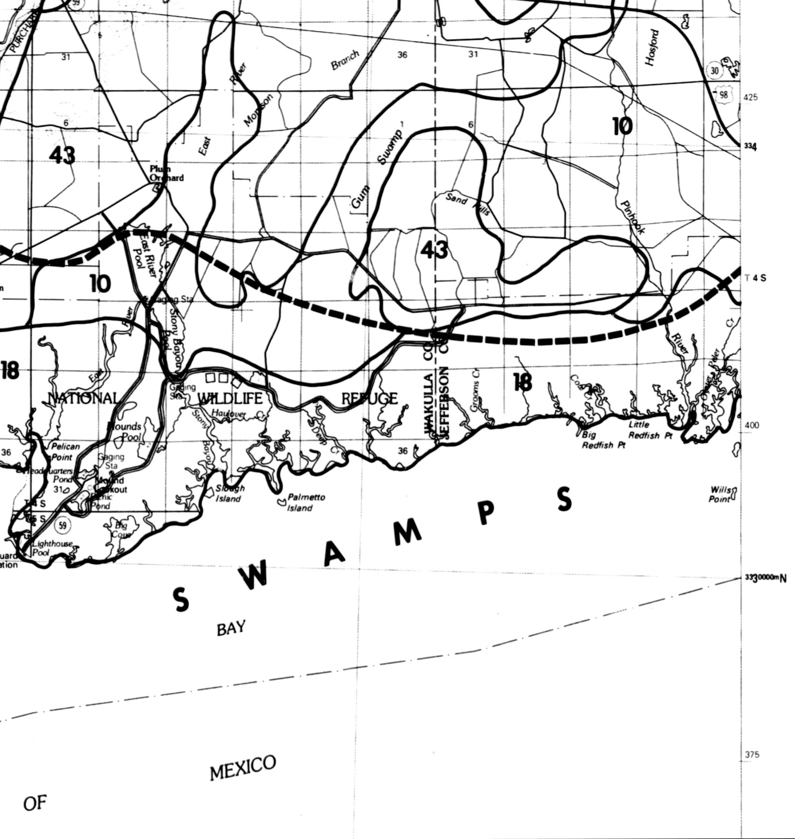
SOIL ASSOCIATIONS

1. Lakeland-Eustis-Lakewood Association
2. Lakeland, Ruston, and Norfolk-Sunsweet, Carnegie and Cuthbert Association
3. Red Bay-Blakely Association
4. Tifton-Carnegie-Faceville Association
5. Norfolk-Ruston-Savannah Association
6. Tifton-Irvington-Lynchburg Association
7. Klej-Leon Association
8. Huckabee-Kalmia-Izagota Association
9. Coastal Dune Land and Beach-Tidal Marsh Association
10. Plummer-Rutlege-Alluvial Land-Fresh Water Swamp-Dorovan-Pamlico Association
11. Lakeland-Paola-Kureb-St. Lucie-Rimini Association
12. Lakeland-Troup Association
13. Troup-Orangeburg Association
14. Dothan-Orangeburg Association


Central City
20
Two
Barrel
Br
Whitehead
Swamp
NORTHERN
65
River
334
425
36
31
36
31
36
31
Ranger Sta
Lookout
1
6
Wilma
Prong
Thomas Bay
1
Bay
Lindsey
6
Bay
Queens Bay
1
6
Rowlett
Cr
APALACHICOLA
West
15
15
Branch
Kern
T 4 S
Bon Ami
15
Bay
APALACHICOLA
NATIONAL
15
15
15
15
Twin Pole
400
Bear
Black Creek
Islands
Cat
Post
Office
Bay
333
36
31
36
31
36
31
1
6
New
1
6
5
Juniper
Creek
Islands
1
6
Mud
Swamp
10
Creek
10
10
10
5
Owens Bridge
10
T 5 S
Boggy
Jordan
375 000 FEET
379
Lookout
Black
22
Sumatra
10
10
Nero
Br
River
5
Lookout
LIBERTY CO
FRANKLIN


Tiger
Creek
Hickory
Tin Top Bay
20
15
36
31
375
T 3 S
T 4 S
10
Bradwell
Bay
36
31
Smith
Creek
Tiger
Creek
Whitehead Lake
LIBERTY CO
WAKULLA CO
67
1
6
Branch
East Camp
Stallion Bay
Monkey
Creek
River
Br
Bush
Arbor
Swift
Juniper
Creek
Long Bay
Poplar Camp
FOREST
Long Bay
Revell
Branch
38
Oak Park
Ochlockonee
Vause
Branch
T 4 S
T 5 S
Gum Bay
Roberts Landing
Sanborn
Lookout
Syfrett
42
Swift Lake
Thousand
Yard
Bay
Creek
Haw
Creek
River
NAT FOREST BDY
Alligator
Alligator Swamp
Creek
Spring
Creek
279
Sopchoppy
Sopch
Cow
WAKULLA CO
Womack
Juniper
State
Lookout
5
Well


Crawfordville
Substation
RAILROAD
Creek
T 3 S
T 4 S
Lawhons Mill
Old Mill Bay
POWERLINES
Lookout
38
10
12
42
18
Bay
Games
JEEP TRAIL
Lake Ellen
Little Lake Ellen
Pigott Pond
Ashmore
T 4 S
T 5 S
Medart
Bonnet Pond
Buckhorn
Alligator Lake
ST MARKS NATIONAL WILDLIFE REFUGE
Buckhorn Creek
Poplar
Otter Lake
Panacea
Panacea Park
Dickerson
Long Lake
R 2 W
R 1 W
319
98
61
30
375
365
367
372
Wakulla Gardens
Hyde Park
Shell Island
St Marks
FORBES
Boggy
Big Boggy
River
St Marks River
Port Leon Lake
Port Leon
Lookout
Big Wash Bayou
Fourmile Pt
RS 4
RS 5
RS 6
RS 7
RS 8
RS 9
RS 10
RS 11
Wakulla Beach
Goose Cr
Mensler Creek
Goose Creek Bay
BAY 1
BAY 2
CBS
CS
ST MARKS
Johns Cove
Kitchen Cove
Little Pass
Sprague Island
Big Pass
Spring Creek
Landing Strip
ST MARKS NWR
Walker Creek
Radio Tower
Shell Pt
Live Oak Island
Cutoff I
Oyster Bay
Smith Island
Stokley Landing
Skipper
Hopkins I
Middle Point Island
Bottoms
Pine Island
Coast Guard Sta
APALACHEE
COASTAL
GULF


43
10
18
43
10
18
Plum Orchard
East River
Monson
Branch
Gum Swamp
Sand Hills
Hosford
Pinhook
East River Pool
Stony Bayou Pool
Gaging Sta
NATIONAL
WILDLIFE
REFUGE
WAKULLA CO
JEFFERSON CO
Grooms Cr
Haulover Cr
Stony Bayou
Deep Cr
Big Redfish Pt
Little Redfish Pt
Pelican Point
Headquarters Pond
Mounds Pool
Mound Lookout
Picnic Pond
Big Cove
Lighthouse Pool
Slough Island
Palmetto Island
Wills Point
S W A M P S
BAY
OF
MEXICO
T 4 S
T 5 S
425
334
400
3330000m N
375
36
31
6
59
98
30

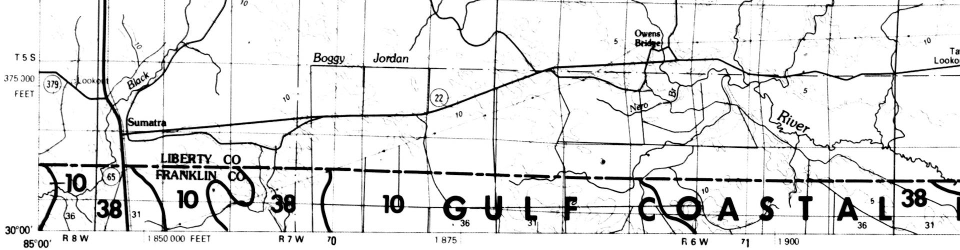
Carnegie and Cuthbert Association

3. Red Bay-Blakely Association
4. Tifton-Carnegie-Faceville Association
5. Norfolk-Ruston-Savannah Association
6. Tifton-Irvington-Lynchburg Association
7. Klej-Leon Association
8. Huckabee-Kalmia-Izagota Association
9. Coastal Dune Land and Beach-Tidal Marsh Association
10. Plummer-Rutlege-Alluvial Land-Fresh Water Swamp-Dorovan-Pamlico Association
11. Lakeland-Paola-Kureb-St. Lucie-Rimini Association
12. Lakeland-Troup Association
13. Troup-Orangeburg Association
14. Dothan-Orangeburg Association
15. Red Bay-Lucy Association
16. Chipley-Scranton Association
17. Johns-Leaf Association
18. Salt Water Marsh-Bayvi-Dirego Association
19. Fuquay-Lucy-Troup Association
20. Dothan-Orangeburg-Tifton Association
21. Lakeland-Faceville Association
22. Chipley-Albany-Leon Association
23. Ardilla-Leefield-Stilson Association
24. Tifton-Faceville-Greenville Association
25. Norfolk-Ruston-Goldsboro Association
26. Tifton-Faceville-Marlboro Association
27. Lakeland-Cuthbert-Shubuta Association
28. Blanton-Klej-Plummer Association
29. Goldsboro-Lynchburg-Rains Association
30. Kureb-Resota-Mandarin Association
31. Lakeland-Foxworth-Centenary Association
32. Leefield-Albany-Stilson Association
33. Hurricane-Chipley-Albany Association
34. Pottsburg-Leon-Rutlege Association
35. Plummer-Pelham Association
36. Rutlege-Allanton-Pickney Association
37. Chipley-Albany-Stilson Association
38. Leon-Albany-Plummer-Chipley-Osier Association
39. Dunbar-Bladen Association
40. Dothan-Stilson-Lucy Association
41. Ardilla-Leefield-Pansey Association
42. Chipley-Albany-Blanton Association
43. Leon-Felda-Matmon Association
44. Dothan-Orangeburg-Red Bay Association
45. Alpin-Blanton-Eustis Association
46. Orangeburg-Lucy-Dothan Association
47. Chipley-Albany-Plummer Association
48. Leon-Mascotte-Rutlege Association
49. Broward, var.-Matmon-Osier Association
50. Manatee, var.-Felda, Var.-Copeland, Var. Association
51. Fresh Water Swamp, Shallow to Limestone Associatio
52. Salt Water Marsh and Swamp-Coastal Dunes Associati
53. Alpin-Blanton Association
54. Chipley-Blanton-Swamp Association
55. Adamsville, var.-Chiefland-Blanton Association
56. Candler-Apopka Association
57. Jonesville-Chiefland-Archer Association
58. Arredondo-Gainesville Association
59. Hernando-Archer-Chiefland Association
60. Sparr-Lochloosa-Tavares Association
61. Adamsville-Osier Association
62. Bushnell-Wabasso-Felda Association

n

n
ion

MICROCOPY RESOLUTION TEST CHART
NBS 1010a
(ANSI and ISO TEST CHART No. 2)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3


T 5 S
375 000 FEET
379
Lookout
Black
Sumatra
Boggy
Jordan
22
Owens Bridge
Nero
Br
River
Ta
Looko
LIBERTY CO
FRANKLIN CO
65
10
38
36
31
5
GULF COASTAL
30°00'
85°00'
R 8 W
1 850 000 FEET
R 7 W
70
1 875
R 6 W
71
1 900

THE FLORIDA ECOLOGICAL ATLAS WAS PRODUCED BY THE U.S. FISH AND WILDLIFE SERVICE, DIVISION OF BIOLOGICAL SERVICES, NATIONAL COASTAL ECOSYSTEMS TEAM (FWS/OBS - 82/47) AND THE MINERALS MANAGEMENT SERVICE FOR COASTAL PLANNERS, DECISION MAKERS, AND THE GENERAL PUBLIC, TO DETERMINE AND EVALUATE CHANGE AND TO RESOLVE CONFLICTS AMONG LAND USES, FISH AND WILDLIFE REQUIREMENTS, AND THE MAINTENANCE OF ECOLOGICAL DIVERSITY. THE STUDY AREA INCLUDES THE COASTAL COUNTIES: ESCAMBIA, SANTA ROSA, OKALOOSA, WALTON, WASHINGTON, BAY, CALHOUN, GULF, FRANKLIN, WAKULLA, JEFFERSON, TAYLOR, DIXIE, LEVY, CITRUS AND HERNANDO, AND EXTENDS OFFSHORE APPROXIMATELY 10 MILES. THERE IS NO ATTEMPT, IN THE DESIGN OR PRODUCTS OF THIS STUDY, TO DEFINE THE LIMITS OF PROPRIETARY JURISDICTION OF ANY FEDERAL, STATE, OR LOCAL GOVERNMENT TO ESTABLISH THE GEOGRAPHICAL SCOPE OF THE REGULATORY PROGRAMS OF GOVERNMENT AGENCIES.

THIS MAP HAS BEEN COMPILED FROM A VARIETY OF SOURCE MATERIALS INCLUDING MAPS, AERIAL PHOTOS, AND REPORTS. SINCE MANY SOURCES CONTAINED GENERALIZED LOCATIONS OF RESOURCES AND OTHER MAPPED FEATURES, THE USER SHOULD NOT RELY ON THESE MAPS FOR PRECISE MEASUREMENTS OF DISTANCES OR AREAS.

PRIMARY SOURCES OF MAPPED INFORMATION:

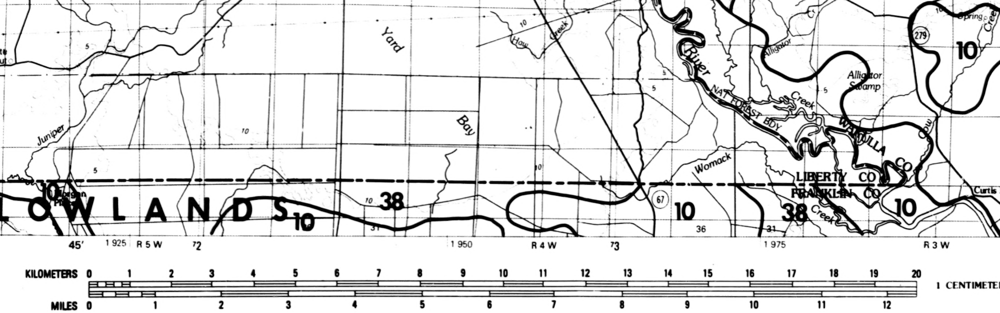
LANDFORMS: Physiographic Map of Florida,
State Bureau of Geology, 1980.

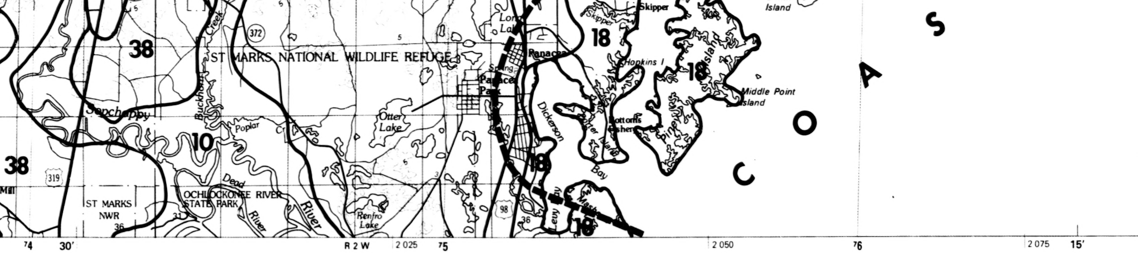
SOILS: General Soils Atlas of Florida,
Division of State Planning, 1975.
General Soils Atlas of Florida, U.S.
Soil Conservation Service, 1982.

ACTIVE DUNES: Black and White Aerial
Photography, 1:80,000 Scale, Mark Hurd
Aerial Surveys Inc., 1980.
Topographic Maps, 1:24,000 Scale, U.S.
Geological Survey, various dates.

GEOLOGIC FAULTS: Map of Escambia and
Santa Rosa Counties Showing Contours on top
of the Lower Limestone of the Floridan
Aquifer, State Bureau of Geology, 1965.

FOR COMPLETE REFERENCES SEE MAP NARRATIVE

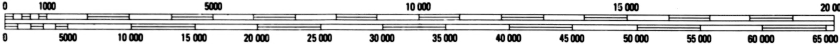

Yard
Haw
Creek
River
Alligator
Alligator Swamp
Creek
NAT FOREST BDY
WAKULLA CO
Cow
Spring
Creek
279
Bay
Juniper
Womack
LIBERTY CO
FRANKLIN CO
Creek
Curtis
Morgan Flat
LOWLANDS
67
10
38
5
31
36
45′
1 925
R 5 W
72
1 950
R 4 W
73
1 975
R 3 W
KILOMETERS 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
MILES 0 1 2 3 4 5 6 7 8 9 10 11 12
1 CENTIMETE


Skipper
Island
S
A
O
C
38
38
38
18
18
18
18
10
372
319
98
ST MARKS NATIONAL WILDLIFE REFUGE
Long Lake
Panacea
Spring
Panacea Park
Hopkins I
Middle Point Island
Dickerson
Bay
Otter Lake
Bottoms
Fishers
Sopchoppy
Buckhorn Creek
Poplar Cr
Dead River
OCHLOCKONEE RIVER STATE PARK
River
Renfro Lake
ST MARKS NWR
Levy Bay
Mill
74
30′
R 2 W
2 025
75
2 050
76
2 075
15′

SCALE 1:100 000

R ON THE MAP REPRESENTS 1 KILOMETER ON THE GROUND

CONTOUR INTERVAL 5 METERS


0
1000
5000
10 000
15 000
20 00
0
5000
10 000
15 000
20 000
25 000
30 000
35 000
40 000
45 000
50 000
55 000
60 000
65 000

10. **Plummer-Rutlege-Alluvial Land-Fresh Water Swamp-Dorovan-Pamlico Association:** Nearly level, poorly drained soils with a thick surface layer overlying a loamy subsoil and very poorly drained soils that are sandy throughout.

12. **Lakeland-Troup Association:** Nearly level to steep, excessively drained soils, sandy throughout, and well drained soils with very thick sandy layers over loamy subsoil.

18. **Salt Water Marsh-Bayvi-Dirego Association:** Nearly level, very poorly drained soils subject to frequent flooding by tidal waters.

19. **Fuquay-Lucy-Troup Association:** Nearly level to sloping, well drained soils with sandy layers over loamy subsoil.

23. **Ardilla-Leefield-Stilson Association:** Nearly level to gently sloping, somewhat poorly drained and moderately well drained sandy soils with loamy subsoil.

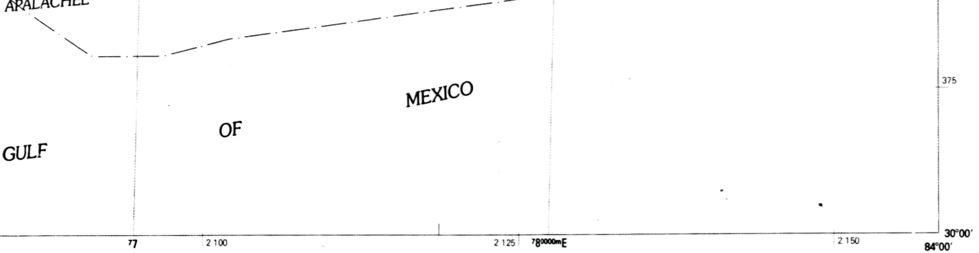
38. **Leon-Albany-Plummer-Chipley-Osier Association:** Nearly level, poorly drained sandy soils with weakly cemented sandy subsoil, and poorly drained soils with very thick sandy layers over loamy subsoil.

42. **Chipley-Albany-Blanton Association:** Nearly level to gently sloping, moderately well drained soils that are sandy throughout, and somewhat poorly drained soils with very thick sandy layers over loamy subsoil.

43. **Leon-Felda-Matmon Association:** Nearly level, poorly drained sandy soils with weakly cemented sandy subsoil, poorly drained sandy soils with loamy subsoil, and somewhat poorly drained sandy soils with clayey subsoils in close proximity to limestone rock.

44. **Dothan-Orangeburg-Red Bay Association:** Nearly level to sloping, well drained sandy or loamy soils with loamy subsoils.

E=__ft/yr ⊢------⊣	BEACH EROSION AREA (P Univ. of West Florida, 1
A=__ft/yr ⊢——⊣	BEACH ACCRETION AREA Univ. of West Florida, 1
■	GULF BARRIER ISLAND
Ⓓ	ACTIVE DUNE AREA


APALACHEE
GULF
OF
MEXICO
375
30°00′
84°00′
77
2 100
2 125
780000m E
2 150

00 METERS

FEET

eriod of Record: 1957-1981;
981)

(Period of Record: 1957-1981;
981)

U
D
NORMAL FAULT
(Showing relative vertical movement, U, up, and D, down)

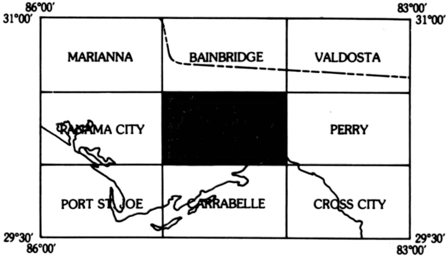
U
D
SUB-SURFACE NORMAL FAULT
(Showing relative vertical movement, U, up, and D, down)

STUDY AREA BOUNDARY

Offshore

Inland (County)

Inland (State)


86°00′
31°00′
83°00′
31°00′
MARIANNA
BAINBRIDGE
VALDOSTA
PANAMA CITY
PERRY
PORT ST. JOE
CARRABELLE
CROSS CITY
29°30′
86°00′
29°30′
83°00′

51. Fresh Water Swamp, Shallow to Limestone Association
52. Salt Water Marsh and Swamp-Coastal Dunes Association
53. Alpin-Blanton Association
54. Chipley-Blanton-Swamp Association
55. Adamsville, var.-Chiefland-Blanton Association
56. Candler-Apopka Association
57. Jonesville-Chiefland-Archer Association
58. Arredondo-Gainesville Association
59. Hernando-Archer-Chiefland Association
60. Sparr-Lochloosa-Tavares Association
61. Adamsville-Osier Association
62. Bushnell-Wabasso-Felda Association
63. Blichton-Flemington-Kanapaha Association
64. Leon-Mascotte-Surrency Association
65. Lynne-Pomona-Pompano Association
66. Candler-Paola-Tavares Association
67. Candler-Adamsville-Pompano Association
68. Arredondo-Kendrick Association
69. Broward-Boca Association
70. Panasoffkee-Bushnell Association
71. Myakka-Basinger Association
72. Meggett, var.-Pompano Association
73. Terra Ceia-Placid Association
74. Arredondo-Sparr-Kendrick Association
75. Candler-Lake Association
76. Masaryk Association
77. Nobleton-Blichton-Flemington Association
78. EauGallie-Wabasso-Basinger Association
79. Paisley-Floridana-Wabasso Association
80. Okeelanta-Aripeka-Terra Ceia Association
81. Homosassa-Weekiwachee-Lacoochee Association
82. Floridana-Basinger Association
83. Salt Water Marsh and Swamp Association
84. Fresh Water Swamp and Marsh Association
85. Blichton-Lochloosa-Kendrick Association
86. Paisley-Bushnell Association
87. Myakka-Pomello Association

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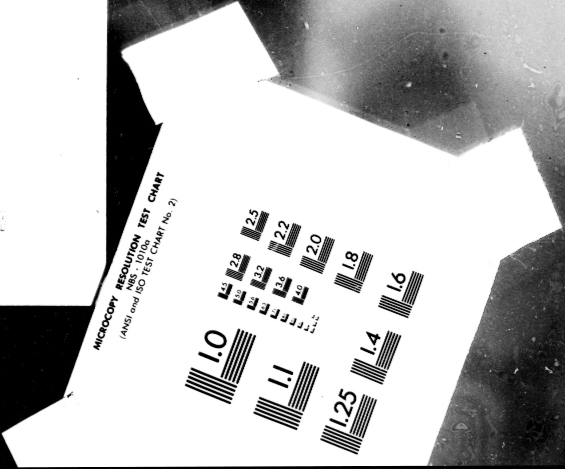
BEST AVAILABLE COPY



MICROCOPY RESOLUTION TEST CHART
NBS - 1010a
(ANSI and ISO TEST CHART No. 2)
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
6.3
7.1
8.0
9.0
10.0